# Carbon Dioxide Phenomenon

**Objective: I can model the movement of carbon in an ecosystem and explain the buildup of carbon dioxide in the atmosphere.**

**Measuring $CO_2$**

**Instructions:**

1. **Turn on the $CO_2$ sensor. Wait for the 30 sec. Countdown. If the alarm sounds, click the "mode" button to turn it off.**
2. **Record the amount of carbon dioxide after 30 seconds in each location.**
3. **Compare the readings to each other. Try to explain why each reading is "higher" or "lower" than the others. The average reading for outdoor air is 415 ppm.**

| Location | $CO_2$ Reading (ppm) | Possible Explanation |
|---|---|---|
| At the propane burner | | |
| Inside the classroom | | |
| In the hall | | |
| Partner's breathe | | |
| Outside | | |
| Car Exhaust | | |

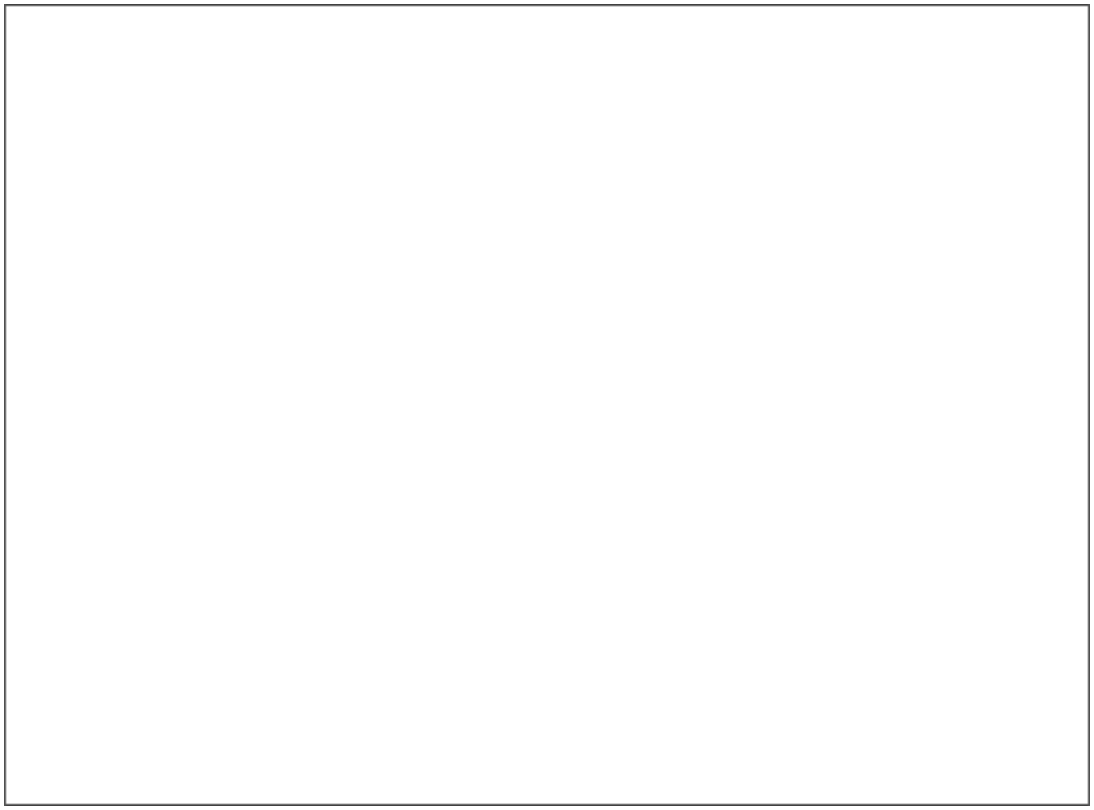
**Carbon Cycle Model**

Instructions: Choose a starting location around the room.  At each location roll the dice, write the name of the station and how you moved to the next station. If you “stay put” write that on the next line and roll again.

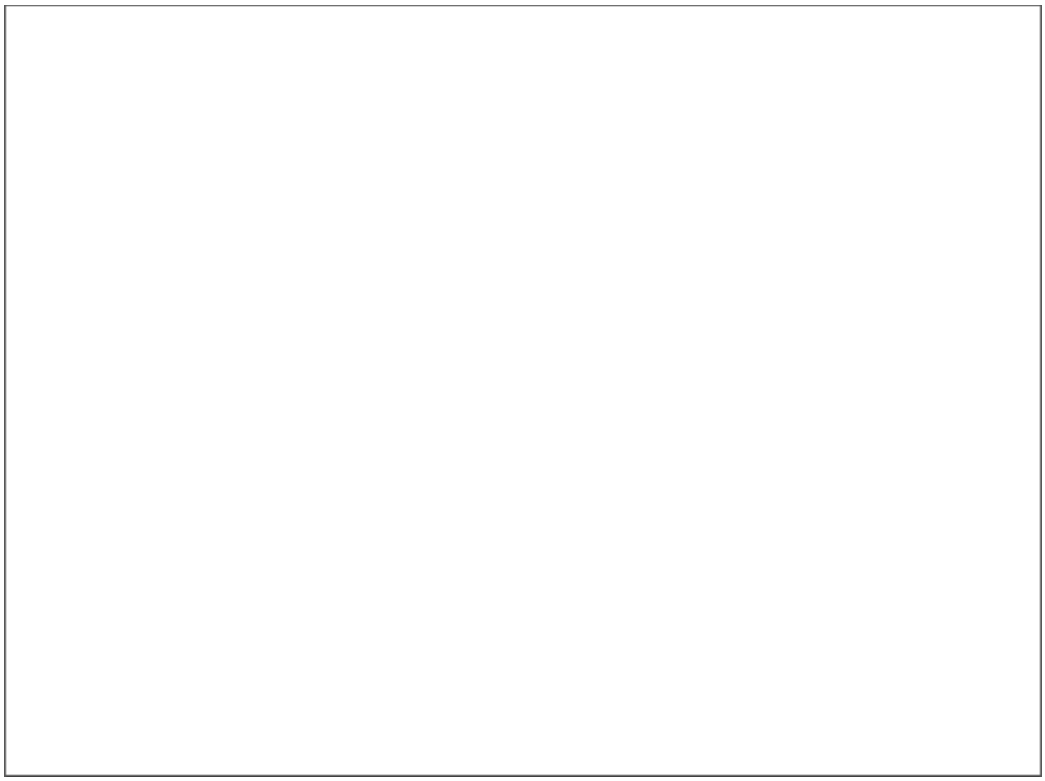
**Take a picture of your journey (list) here.**

***Directions:***

**Use the list to create a model showing your journey.**



**Use several individual models to create a larger model showing the entire carbon cycle.**



Data Analysis:

Identify at least 4 patterns from the data you collected. Hints (places you could get stuck, places carbon tended to go, repeating loops, places carbon rarely went, common forms of carbon)

1.
2.
3.
4.

Conclusions:

1) What explanations do you have for any of these patterns (explain one or several)?

2) Identify the parts of this cycle that move carbon quickly.

3) Identify the parts of this cycle that move carbon very slowly.